



Overview

- Ø Initial Focus on Water Quality Testing
 - Local citizens met in November 2004 to discuss monitoring of the Corsica River.
 - Met with town, county and state agencies in January 2005 and agreed on approach.
- Ø Other community efforts being done by the same people resulted in a much broader view.
- Ø Led to formation of Corsica River Conservancy.

Corsica River Testing

- Ø Two “on water” training sessions by MDE
- Ø MDE provided YSI Model 85
- Ø We purchased YSI Model 60 and Secchi disk
- Ø Enterococci testing provided by Health Dept.
- Ø Protocols were written and training conducted
- Ø Weekly tests from May 18 – October 26
 - ┆ Temperature, clarity, dissolved oxygen, pH, salinity, conductivity and bacteria
 - ┆ Tests at two depths: one foot and bottom
 - ┆ 19 active citizens
 - 350 volunteer hours
 - 40 boat hours

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Corsica River Testing Results

- Ø Water Clarity
 - ┆ Avg. 0.5 meter at headwaters
 - ┆ Avg. 1.0 meter at the mouth
- Ø Dissolved Oxygen
 - ┆ Between Gunston School and Centreville, 65% of bottom samples were below 5mg/l.
- Ø Enterococci
 - ┆ 61% of the samples at the wooden bridge exceeded the daily maximum for safe swimming.
 - ┆ All samples downstream of Sycamore Point were in limits.
- Ø More detail later

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Other Activities

- Ø Conducted major shoreline restoration.
 - ┆ 18 properties/ One mile of shoreline
 - 40+ people involved
 - 600+ volunteer hours
- Ø Conducted SAV grow out
 - ┆ 12 week period
 - 28 trays of grasses planted
 - 12 families (Adults and children)
 - 300+ volunteer hours
- Ø Monitored SAV for VIMS and NOAA
 - ┆ 4 people/12 volunteer hours

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Other Activities

- Ø Queen Anne's Co. High School tree grow out.
 - ┆ Assisted staff and students in growing and planting "buffer" trees.
 - 50 students/10–12 adult volunteers
 - 1000 volunteer hours
- Ø Participated as stakeholders and implementers in the Corsica River Watershed Restoration Action Strategy (WRAS).
 - ┆ Three volunteers/Innumerable hours

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Other Activities

- Ø Actively supporting the Corsica River Watershed Pilot Program.



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- Ø Began plans to incorporate as a non-profit during the summer.
- Ø Received Maryland non-profit status in November, 2005.
- Ø Have Federal 501(c)(3) tax exempt status through an umbrella organization
 - The Foundation For Community Partnerships, Inc.

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Summary

- Ø All of above was accomplished with pure volunteer effort.
 - | Over 2000 volunteer hours (equivalent of 1 person 40 hours/week for 1 year)
 - | no overhead
 - | no budget.

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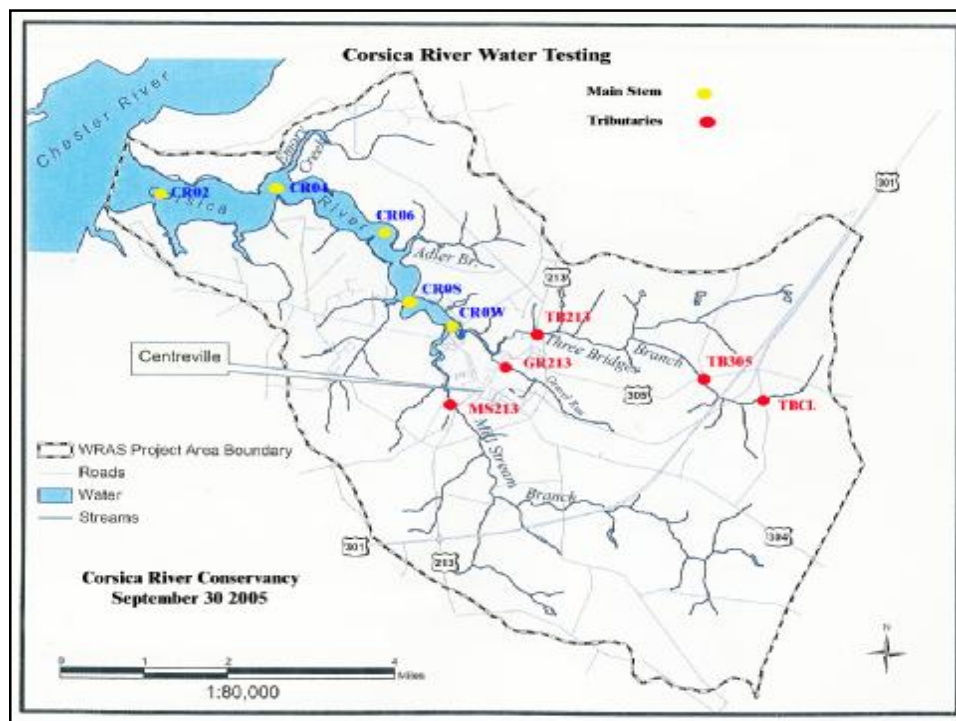
Sampling Locations

- Ø Most testing was at five points on the main stem of the Corsica River
- Ø Tributaries were tested for bacteria on two occasions.
 - ┆ Three points on Three Bridges Branch
 - ┆ One point on Gravel Run
 - ┆ One point on Mill Stream Branch

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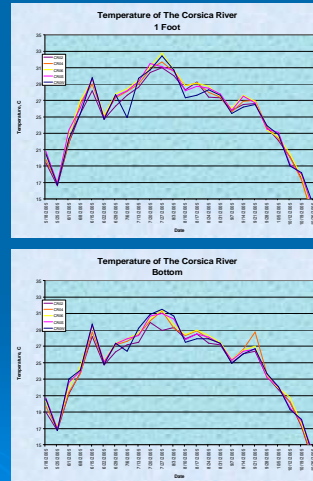
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Water Temperature

- Ø Average
 - | Surface 25.3 C
 - | Bottom 24.9 C
- Ø Average at CR02
 - | Surface 24.9 C
 - | Bottom 24.4 C
- Ø Average at CR0W
 - | Surface 25.1 C
 - | Bottom 25.0 C
- Ø Average Peak 7/27
 - | Surface 31.8
 - | Bottom 30.8 C



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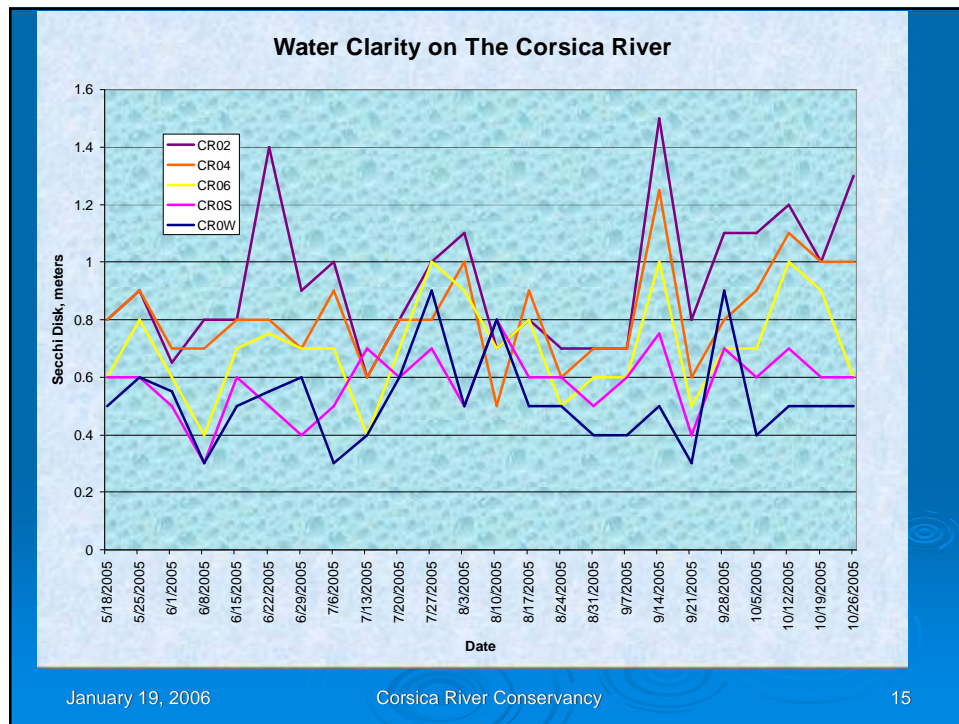
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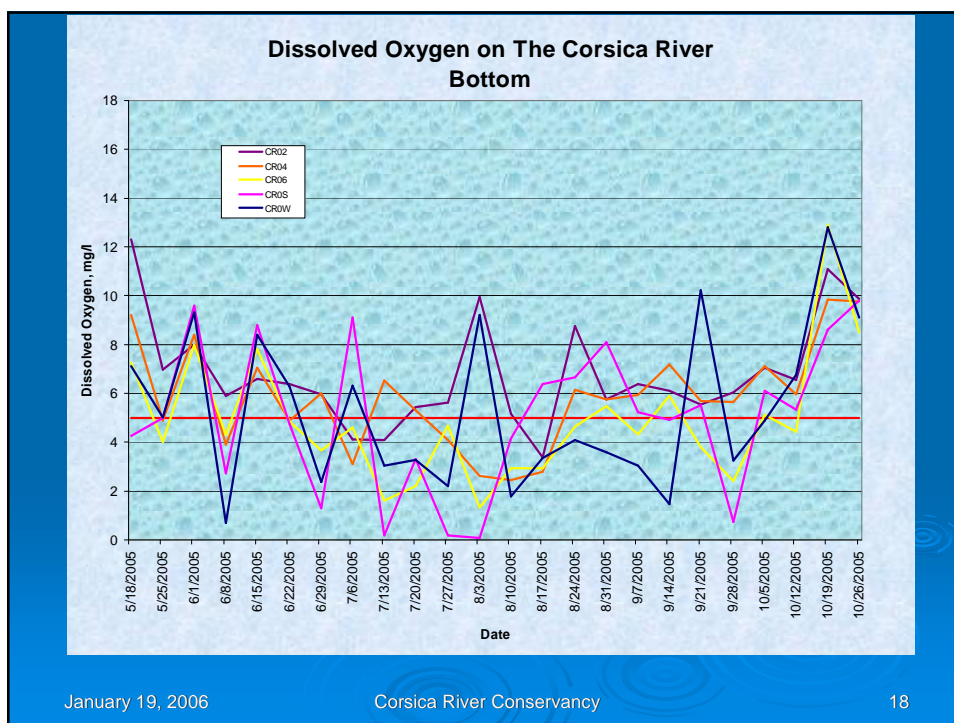
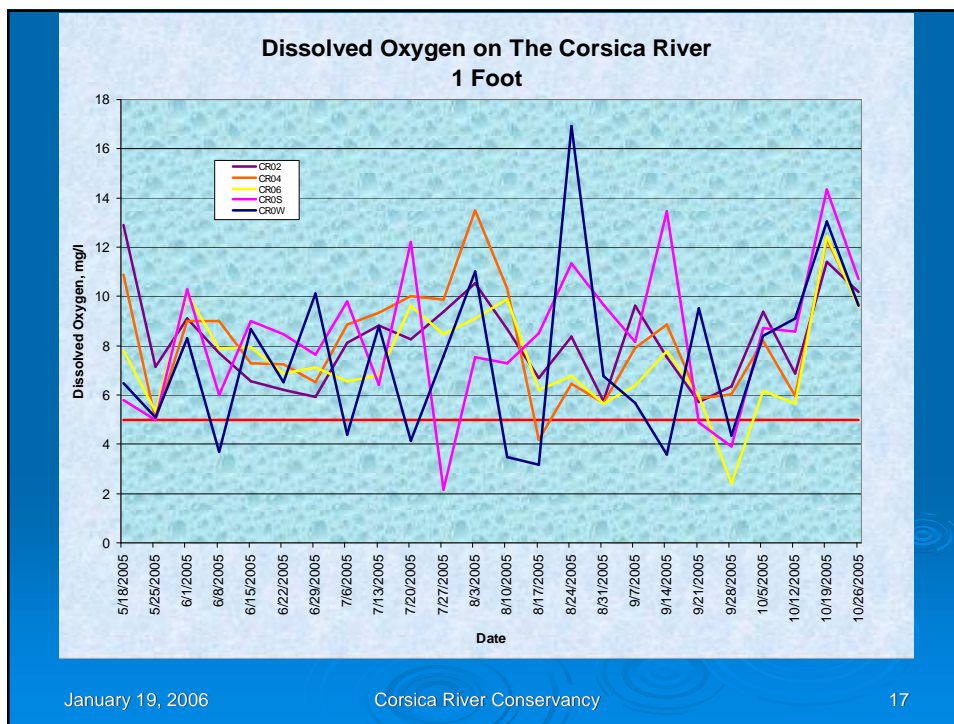
Water Clarity

- Ø Measured with a Secchi Disk
- Ø Consistently very poor near the head waters 0.3 – 0.9 meters
- Ø Consistently better near the mouth of the river 0.7 – 1.5 meters



Dissolved Oxygen

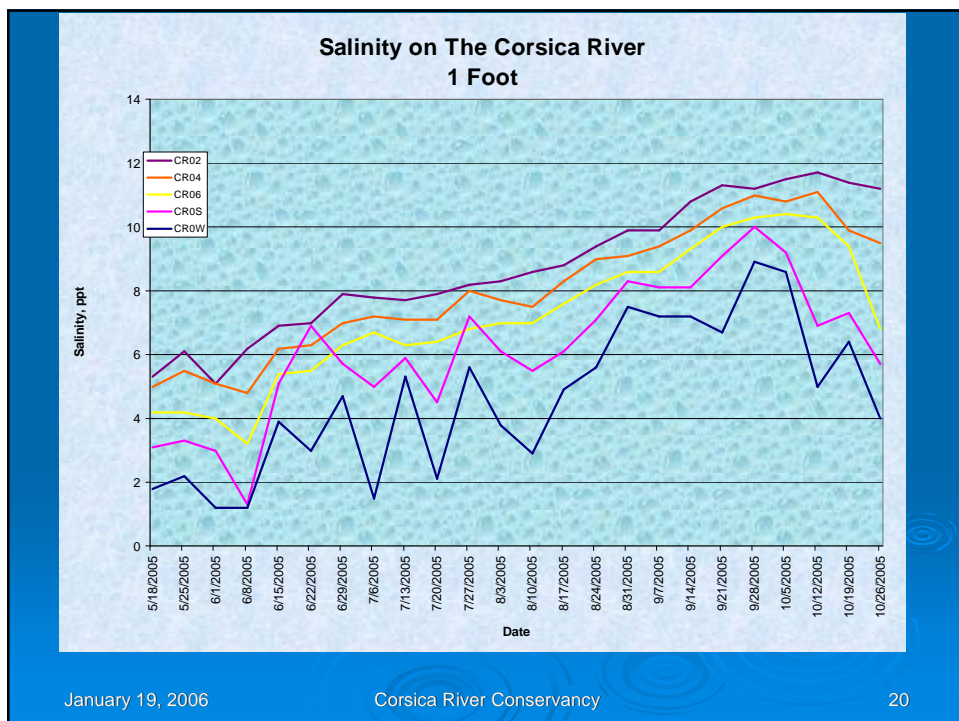
- Ø Dissolved oxygen (DO) of less than 5 mg/l is stressful to fish.
- Ø DO readings equal to or less than 5 mg/l
 - ┆ Total
 - Surface 14%
 - Bottom 49%
 - ┆ Wooden Bridge, Sycamore Point and 06 Marker
 - Surface 20%
 - Bottom 65%

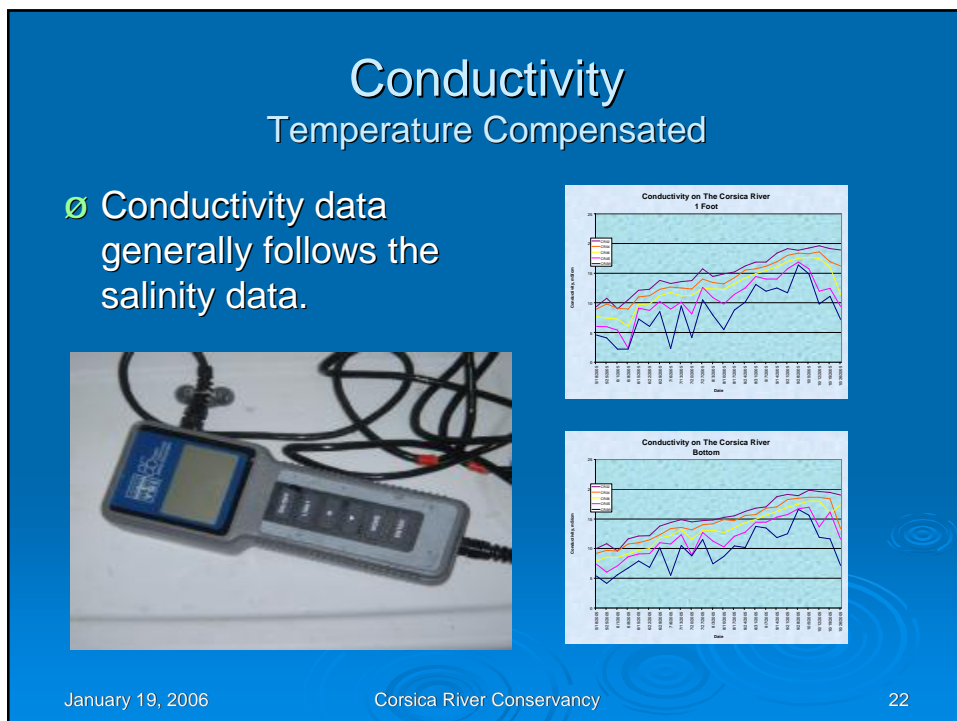
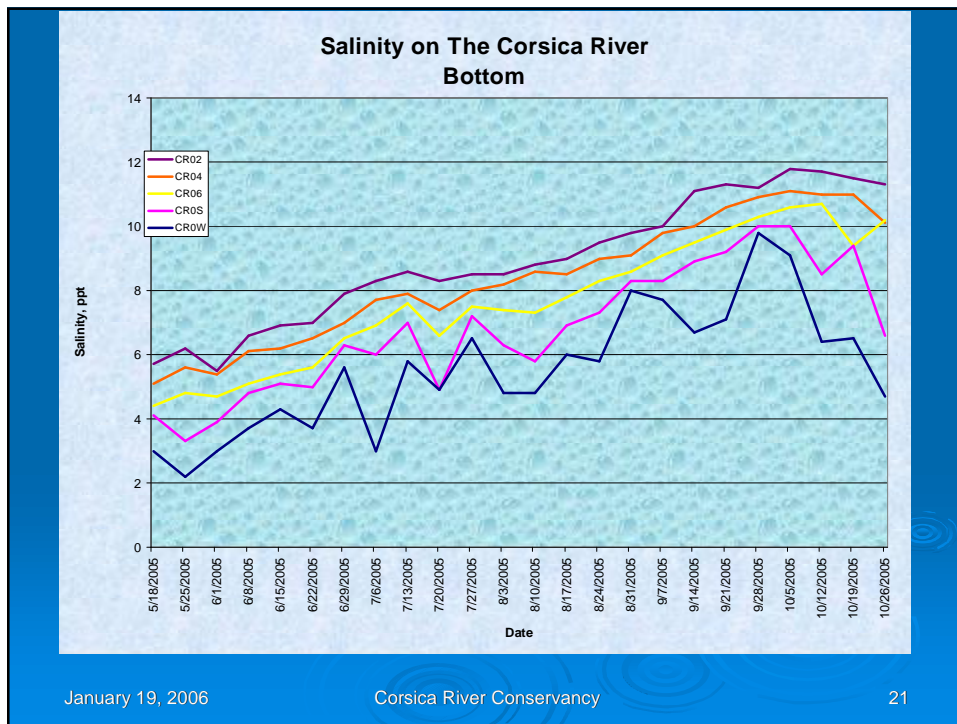




Salinity

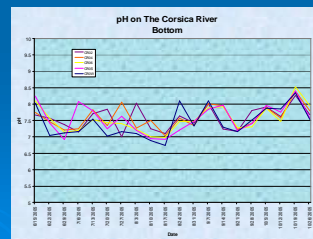
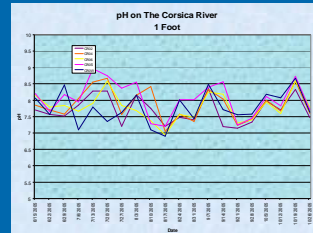
- ✓ Steady and significant increase in salinity through the summer
- ✓ July to September the delta between CR02 and CR0W decreased
 - ┆ Surface delta dropped from 4 to 2 ppt
 - ┆ Bottom delta dropped from 4 to 1 ppt





pH

- Ø 7 – 8.5 pH throughout the season.



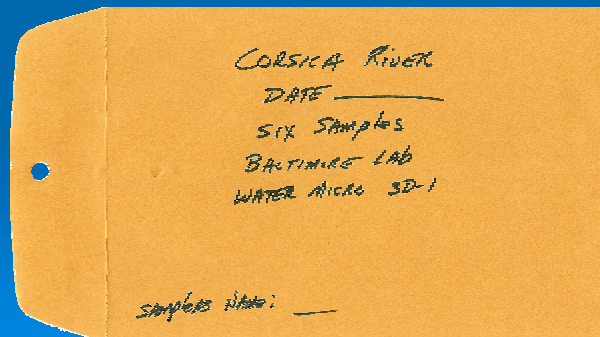
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Bacteria

- Ø Samples were submitted to the state lab in Baltimore and tested for Enterococci with other samples from public swimming areas.
- Ø The beach testing program ended in mid-Sept.

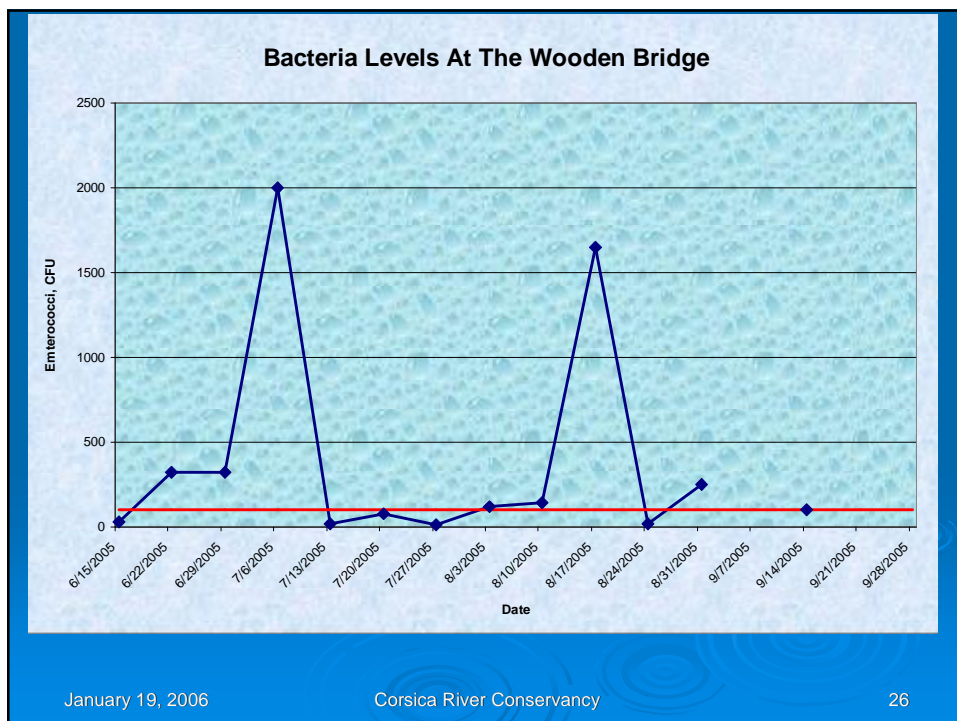


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- Ø Bacteria was high at the wooden bridge:
daily single number limit = 104 CFU
 - Two spikes above 1500 CFU
 - 8 of 13 (61%) samples at or above daily limit



Bacteria

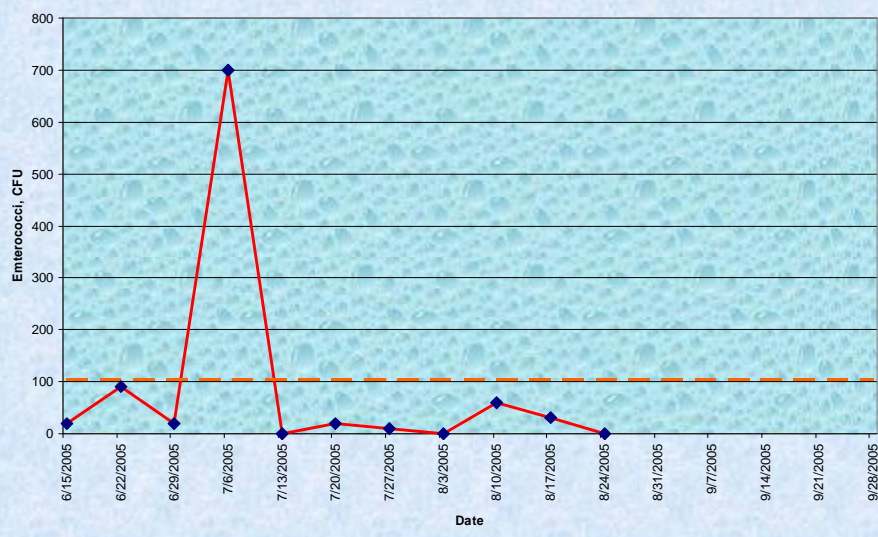
- Ø Sycamore Point above limit once.
- Ø All other points were good.

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Bacteria Levels At Sycamore Point



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Tributary Bacteria

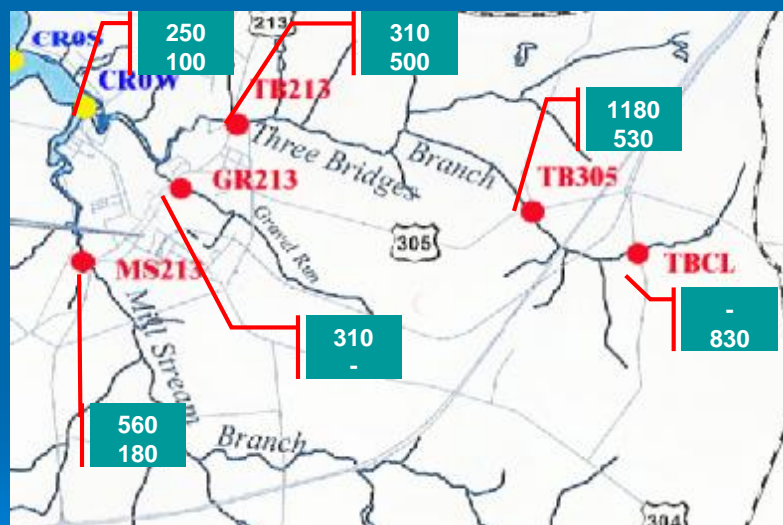
- Ø Consistently high bacteria levels at the headwaters prompted upstream sampling
- Ø Tributary data was taken 8/31 and 9/14
- Ø All samples were between 180 -1180 CFU
- Ø Each time, the further upstream the higher the bacteria

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Tributary Enterococci Testing



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Path Forward

- Ø Continue river monitoring in 2006.
 - Determine the causes for high bacteria at the headwaters of the Corsica River.
- Ø High School “Tree Grow Out”
- Ø SAV Audit
- Ø WRAS Implementation
- Ø Septic System upgrades

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Path Forward

- Ø Work with local and state agencies on implementation of Corsica River Watershed Pilot Program.
- Ø Strive to be a positive community influence working with a cooperative can do attitude toward the improvement of the Corsica River.

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